Information Industry: An Overview

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ABSTRACT

The objective of this paper is to outline the concept and characteristics of information industry and then examine the various types of industries that are associated with the information and also describes the information personals. It is the industry which is related to creation/production, organization, and dissemination of the content or information and makes profit out of them. This is the platform for the information professionals to produce and sell the information. The paper also shows how the technologies have changed the industry and how the information is very easy to get access in this technological environment.

Keywords: Information industry, information professionals, technology, internet

INTRODUCTION

The information industry or information industries are industries that are information intensive in one way or the other. It is considered one of the most important economic sectors. There are many different kinds of information industries, and many different ways to classify them (Wikipedia, 2014) The information fields have spread out of the libraries and information centers, and have been transformed into an industry that sells, organizes, and processes information. Industry in general sense is an organization where raw material processed to finish products. The basic purpose of any industry is production, it may agricultural production, or it may be industrial production. According to Churchill, effective decision making depends on the quality of information input, and marketing research plays an essential role in providing accurate and useful information. However, here, the connotation of information industry includes those players who produce/ generate process store and disseminate information and collect revenue (Churchill, 1999).

Information Industry

Encyclopaedic Dictionary of Library and Information Science defines information industry as a broad term covering all the companies and individuals in the business providing information and access to information for a profit, including the mass media, commercial publishers, software and databases producers and vendors, indexing and abstracting services, and freelance information brokers. Public libraries, academic libraries, and many types of special libraries function outside the information industry because they operate on a nonprofit basis. Because the industry encompasses such a wide range of commercial enterprises it has no single trade journal. According to Harrods Librarians' Glossary and Reference Book it is a loosely defined term for information-based activity: library automation systems and services, bibliographic agencies, publishers and database producers, specialist software houses and computer companies, web sites developers, intranet specialists, online vendors, hosts and gateways, CD-ROM publishers and vendors, business information providers, consultants, conference organizers, and professional associations.

Characteristics

The marketing has its four "Ps": product, promotion, price, and place (distribution). In the case of information industry, it has four "Gs": generate, gather, group information, and then give (sell) information to others. Thomas W. Miller (2000) explains the functions of these four Gs:

Generate information: Firms generate information when they develop new scales and coding schemes, specify models, set priors, or provide a theoretical organization for research. Interpreting textual data from in-depth interviews or focus groups and writing research reports--these are creative, generative processes. Firms also generate information, quite literally, when they employ computer-intensive statistical methods, resembling techniques, or data augmentation. It is their styles of information generation that often distinguish one research firm from another. Successful firms in the information industry are creative firms.

Gather information: Central to the information industry is the process of gathering information. Research firms gather primary information from business managers and consumers. They also gather information from a variety of secondary sources. Traditional modes of gathering include face-to-face and telephone interviews and focus groups, mail surveys, and observational studies. Today's methods of gathering include the additional methods of online research. Successful information industry firms are efficient gatherers.

Group information: George A. Miller (1956) called it "chunking." It is easy to be overwhelmed by the data, by the gigabits of information that come our way each business day. To learn from data, firms organize, aggregate, and process those data. They use model-based or data-adaptive statistical methods to transform, smooth, or reduce data. They convert data into summary statistics, parameter estimates, and probability statements. Although analysts may not reduce data down to what Miller (1956) called "the magic number seven, plus or minus two" chunks of information, their grouping activities should yield a more manageable, more understandable organization of the data. Successful information industry firms group information in meaningful ways.

Give information to others: All types of firms are involved in information generating, gathering, and grouping. But for the firms in the information industry, the information providers, information generating, gathering, and grouping are primary activities. Information providers make and sell information. Information clients buy and use information. Successful information industry firms provide long-term value to their clients.

Types of Information Industry
There are many different kinds of information industries, and many different ways to classify them. It is the industry which is related to creation/production, organization, and dissemination of the content or information and makes profit out of them. This is the platform for the information professionals to produce and sell the information. The industry is generally divided into few different segments: Information-Content Industry, Information-Delivery Industry, Information-Processing Industry, Information-Processing device manufacturer Industry and research Intensive Industry.

The Information-Content Industry
The information content industry can be divided into two categories: primary and secondary.

Primary: The primary sector includes the organization in both the public and private sectors that produce and develop intellectual property. In this industry information is generated by the different creators like authors, composers, artists, filmmakers, animators and other related occupations. Information is sold by the creators to the different professionals like: publishers, broadcasters, distributors and production companies; though, the raw intellectual property is taken by them. In some cases governments of all types are also create a huge quantity of information. They create, hold, use and publish large amount of information on different topics. Thus, this segment of information industry is related to the creation and generation of the information.

Secondary: The secondary sector is concerned with compilation of information: the compilers of reference works, databases, statistical series and '*real time*' information services that supply constant flows of information about things like share and commodity prices. The publishers enable better access to primary publications by indexing and abstracting the primary publications (Mukherjee, 2012). In this sector, there are another group of online services provider exists whose job is not to produce but to collect information. We can recognize them as information aggregator industry. Aggregators add value by combining various primary and secondary sources into packages. Thus, the secondary information content industry is related to compilation, aggregation and collection of the information.

The Information-Delivery Industry
This is the second segment of information industry which is concerned with delivery and dissemination, communication and dissemination networks are developed and managed so we can properly communicate the information. The industry comprises the telephone, broadcasting and book retail industries. In this type of industry information is not generated but their core business is to disseminate/deliver the information to end-users. In short, this is the segment which is concerned with only the dissemination and delivery of information. These industries prove how much of an economy is about information, as opposed to materials.

The Information-Processing Industry
This industry is concerned with information processing services. In this sector information is not available as a tangible product but as a service. These kinds of service industries can be considered as an information-intensive part of various industries that is externalized and specialized. The main focus of this industry is only to make available the services.

In the context of library, these type of industries help in providing tools for managing, organizing and providing access to it through internal system and to clients' desktops. For library technical services, there are few such industries. They are providing tools for cataloguing, circulation and public access (Mukherjee, 2012). In fact, this sector of information industry is service oriented.

The Information-Processing device manufacturer Industry
This sector of information industry includes manufacturers of information-processing that requires research and sophisticated decision-making. Hardware producers and software producers are involved in this sector to provide us different technical products. The hardware producers design, develop, manufacture and market computers, telecommunications equipment and consumer electronics. The software producers provide us different kind of operating systems like UNIX, DOS or Windows, application packages like spreadsheets and word processors, and many more so that we can easily handle the information in any format. Various kinds of other devices are also manufactured in this sector as: printing and copying machines, measurement and recording devices, electronic and many other devices.

Research Intensive Industry
The segment research intensive industry is concerned with the information production or sophisticated decision-making through conduct various researches, they played an essential role in decision-making process. We can say these industries involve a great deal sophisticated decision-making, although the part is combined with manufacturing or "non-informational" activities. They are the actual creators of information through different kind of experimentation and experiences.

Thus, information industry is a marketplace by convergence of information contents. Hardware, software, telecommunication, and communication technology is used to provide the services & products to enhance the problem solving capacity of the individuals.

Information Personnel
By information personnel we means those professionals who generate, gather, record, process, organize, preserve, and disseminate the information and provide various services based on information. In simple words, those who are engaged in any kind of information related activities are called information personnel. There are a number of information personnel in the information industry but here some of the most frequently encountered types are discussed, as below:

Generators
Those who are responsible for the discoveries, invention or the generation of the information or new ideas are called information generators. Authors, researchers, scientists, analysts, government, institutions like: Lib. & Info. centers, Documentation centers, R & D institutes, Business & industrial organizations are comes under this category.

Providers
All persons engaged in dissemination related activities are known as information providers/ disseminators. Library personnel, documentalists, information officers, extension workers, marketing professionals, publishers, broadcasting personnel, consultants, teachers and others are involved in this category.

Intermediaries
Who work between the primary user and data and information sources, helping the user to reach an information state, are considered as Information intermediaries. In other words, their activities are concerned with bringing a match between the information seekers and the information itself. Information brokers, information consultants, online vendors, technological gatekeepers, invisible colleges, information filters, expert systems, extension workers can be included in this category.

Functions of the Information Personals
Indeed, the job of the information professionals is to satisfy the users' need of information, to achieve this objective they produce, acquire, collect, store, manage, disseminate and retrieve the information in many possible ways. In this digital era, the role of the information professionals has completely changed. The only core business of the information professionals is to make available the information for the users. They accept the changes and challenges of the industry and give their best to provide the services to the users. In context of activities of information workers Becker explained duties as:
   a)   coordinating relevant information activities;
   b)   providing policy oversight and guidance;

c) planning program and budgets;
d) managing personals;
e) planning, developing and operating automated and non-automated information system; and
f) providing information technology support services.

Similarly, Special Library Association of USA identifies diverse responsibilities that Information Professionals may have included:

a) Developing and maintain portfolio of cost-effective, client valued information services that are aligned with the strategic directions of the organization and client groups
b) Building a dynamic collection of information resources based on a deep understanding of clients' information needs
c) Gathering evidence to support decisions about the development of new services and products
d) Maintaining current awareness of emerging technologies
e) Assessing and communicating the value of the information organization, including information services, products and policies to senior management, key stakeholders and client groups
f) Contributing effectively to senior management strategies and decisions regarding information applications, tools and technologies, and policies for the organization.

Technology and the Information Industry
"Technological Environment means the development in the field of technology which affects business by new inventions of productions and other improvements in techniques to perform the business work" (Business education, 2014). Technological change brings many new opportunities for any industry. Obviously, new technology can create new products and services, thereby creating entire new markets for industries. Moreover, improvements in technological products and processes can increase productivity and reduce costs.

Technology consists all the aspects like software, hardware, internet etc. People use the hardware and software which are developed to access the information, made a great impact on the companies that offer information products and services. Alongside this, the rise of the internet as a distribution network for information services and the world wide web as a user-friendly interface to examine online databases have allowed new contestant into the marketplace that have been able to make use of a relatively open and widely used platform. We can create, organize, store, disseminate, sell, buy, store and retrieve and also evaluate the use of information in the internet environment. It was very difficult for content creators and publishers to determine the use and understand the behavior of the consumer in the traditional publishing, but it is not so in this technological environment. The internet atmosphere offers immeasurable opportunities to understand the behavior of their consumers in different ways. So, information industry grew with the development of internet and making profit at this platform simultaneously.

Clarke (2000) said at a hacker conference in 1984, "on the one hand information wants to be expensive, because it is so valuable. The right information in the right place just change your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time. So you have these to fighting against each other." (as cited in Saulles, 2012) Paul Al-Nakaash, Head of Content Alliances at Lexis Nexis, recognizes these new pressures and the responses that are required if companies like his are to remain relevant: Aggregators must focus on meeting end user needs. It is no longer enough to have information if it is not available to a user at the appropriate time (Al-Nakaash, 2011). Now, it is the time for the information professionals understand the users' need and give the better result in this profession. They should create; and make a smooth dissemination of the right product or information at the right time, place, and cost in the most useful format.

The section considers acceptable attempts to use the internet as a distribution tool. So, internet supports and assists the professionals to give better services to the user at the least cost and time. They can offer a variety of services through internet to the user at their desk, anywhere and anytime.

CONCLUSION

The emergence of the technology has completely changed the information industry by their production, marketing and services. There can be the drastic production of different databases in this internet environment. There is more digital production, storage, and dissemination of information rather than the analogue or hard copy production. There is more

integration of information in the form of multimedia and hypermedia. The information-oriented society will increase higher expectations amongst consumers, who will be more discriminating and look forward to higher standards of products and services. Clients will be more desired to buy those products and services which are given by the professionals in the more clear, accurate and understandable form.

Now users can get every information or service in any format on our desk, information professionals help us to provide our desired information anywhere and anytime; it is possible just because of the technological developments. Information professionals can capitalize on their skills in this technological environment and give best services to satisfy the users. To achieve this goal they are trying to raise new models of information production, distribution and consumption. Now we can say that it is the cultural response of the generation which has grown up with the web which is becoming so important in driving change.

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